worse and died. The vaccine caused an immediate large increase of granules in the sputum, lasting several days. One of the abdominal cases, after drainage of an abscess in the groin has apparently completely recovered after two months of vaccine treatment. The second died after varying periods of improvement. The impression was that the acute process was held in check. Of the 4 jaw cases, 3 have recovered, and 1 is rapidly improving. It seemed to Kenicult and Mixter that the use of vaccines in superficial actinomycosis does do good.

The Results of the Treatment of Pulmonary Tuberculosis with Rosenbach's Tuberculin.—R. KOHLER and M. PLAUT (*Zeitsch. f. klin. Med.*, 1912, lxxiv, 179) have employed Rosenbach's tuberculin in the treatment of pulmonary tuberculosis. This preparation represents one of the many attempts which have been made to obtain a less toxic substance than Koch's old tuberculin. It is a cluture of tubercle bacilli inoculated with Trichophyton holosericum album. The latter alters (digests) proteins, and it is supposed that the toxic, labile molecules of the tubercle bacilli are attacked. The toxicity of this tuberculin is apparently about 100 times less than the old Koch's tuberculin, while the active immunizing property is undiminished in strength. Kohler and Plaut have selected 80 dispensary patients, most of whom were in the first stage, though some were in the second stage of pulmonary tuberculosis. One-half of them were treated with tuberculin, the remaining half being treated with hygienic and dietetic measures alone. The patients were carefully followed for several months. The results obtained in the group treated with Rosenbach's tuberculin were strikingly good. The disease was favorably affected in 85.4 per cent. of the cases, whereas only 36.8 per cent. of the controls improved. The result is even better than this would indicate, for the patients treated with tuberculin had not the benefit of the hygienic measures used with the controls. A gain in weight was noted in 70.2 per cent. of the patients treated with tuberculin, in 33.4 per cent. of the controls. Of the tuberculin patients, 16 had elevations of temperature when they came under treatment; in 13 the temperature became normal, in 3 it was uninfluenced. The effect of the tuberculin on the subjective symptoms of the patients was the most remarkable feature of the treatment. Many of the patients were sceptical in the beginning, and frequently complained of sore arms from the injections; it is probable that suggestion can be eliminated. Nevertheless, the cough lessened or disappeared completely; night sweats, of which the majority complained, had ceased in all but 4 cases. The appetite was greatly increased, and pains were diminished or vanished. Reactions to the tuberculin were both local and general (swelling and pain in the arm, elevation of temperature, etc.). In many instances the local signs in the lungs increased shortly after the institution of the tuberculin treatment, to improve later. The case histories are given in considerable detail, and the dosage of the tuberculin is considered.

The Gastro-intestinal Disturbances of Pernicious Anemia.—In 58 cases of pernicious anemia, FRIEDENWALD (*Boston Med. and Surg. Jour.*, 1912, clxvii, 160) has made close observations of the gastro-intestinal manifestations. Loss of appetite was observed in 38 cases, nausea in 27, vomiting in 19, indigestion in 33, diarrhea in 20, constipation in 27. Enteroptosis was present in 21 instances, atony of the stomach in 29. In 30 cases there was absence of gastric secretion. The total acidity ranged between 8 and 14. In 9 cases analysis during a period of improvement in the blood and general health did not show a return of gastric secretion.

Trichiniasis.—The researches of Romanovitch (*Annales de l'Institut Pasteur*, 1912, xxvi, 351) upon trichiniasis emphasize the advisability of daily examinations of the circulating blood after the ingestion of suspected food. The female parasite penetrates the mucous membrane of the intestine, but never deeper than the muscularis. She does not reach the mesenteric glands. The larvæ are deposited in the lymph vessels or their neighborhood, and reach the circulating blood through lymphatic channels. The larvæ can enter serous cavities, peritoneal, pleural, and pericardial, but they are destroyed rapidly. It is definitely demonstrated that the larvæ penetrate the sheath of the primitive muscle fibre. This is because here better than elsewhere, the nutritive elements are found of which it has need. In traversing the intestinal mucosa the female is accompanied by bacteria. The character of infection in the blood of man and animals infected is polymicrobic. The serum of infected rabbits becomes very toxic, as early as nine days after the ingestion. The toxicity corresponds with the intensity of the larval infestation. The animals which survive an injection of the toxic serum show great wasting. The search for antibodies is unsatisfactory, both by the method of precipitins and by complement fixation. An observed case of re-infection confirms that of other authors and emphasizes the impossibility of immunizing against a new infestation. There is no preventative or abortive treatment. Salvarsan has no effect.

Viscosity of the Blood and Its Relation to Venous Murmurs.—J. Matsuo (*Deutsch. Archiv f. klin. Med.*, 1912, cvi, 433) has examined the viscosity of the blood of a large series of healthy and anemic Japanese; at the same time hemoglobin estimates and counts of the blood cells have been made. His attention has been directed chiefly to the occurrence of anemic or hemic murmurs. He finds a *bruit de diable* almost invariably present when the viscosity is below 2.8; when the viscosity rises to 3 or 3.1 the murmur disappears. In the majority of cases the intensity of the murmur is inveresly proportional to the viscosity value.

The Effect of Meat Extractives on the Utilization of Vegetable Diet.—H. Wolff (*Zeitsch. f. klin. Med.*, 1912, lxxvi, 66) has continued his investigations of the effect of extractives on the utilization of vegetable food. His first studies were made on dogs. The present observations were made on man. He finds (1) that persons on a vegetable diet, insufficient of itself to meet the nitrogen requirement of the body, improved greatly under the administration of 5 grams of Liebig's beef extract, the nitrogen metabolism being practically in equilibrium. The result was due partly to better utilization of the nitrogen in the food and partly to a lessened excretion of nitrogen. (2) During the